

CLAIMS

- 1) Telephonic alarm device able to send signal, through vocal messages on telephonic lines (PSTN, GSM or similar) informing the risk of decay of the perishable goods preserved in the refrigerating units and freezing systems. Device characterized by the fact that includes a circuit for the control of temperature, compound by external sensors, electronic programmable thermostats and electronic programmable timers, is able to activate automatically a circuit and send signals of alarm through telephone, when occurs a variation in the temperature (high or low) set-up. This device activates the telephone line automatically, selects the telephone numbers from its memory and transmits the alarm call, registered in vocal synthesis, associated to the fridge in damage. Simultaneously, a loud alarm will locally be activated through the buzzer and is visible through the led diode attached to that particular fridge.
- 2) Device, as claimed in claim 1 characterized by the fact that includes one or more sensors, even cordless, installed in the refrigerating units to acquire and monitor the measure of temperatures, connected to the basic circuit. The circuit, equipped with buffer for the storage of data, allows to share the data through the connection interface, with the outside (type USB, RS232 port or similar). This makes possible to store the history of temperature measurement for a successive electronic data processing and electronic data storage, as indicated by the European norms HACCP.
- 3) Device, as claimed in claims 1 and 2 characterized by the fact that includes an external module (type USB, RS232 port or similar) with solid-state memory on board can be connected to the device, through the interface connection and then to a personal computer, and vice-versa, for the data exchange (programming, temperatures data, etc.), a firmware for the management and functioning of the circuit with a specific software application is included for the use of the different functions of the device.
- 4) Device, as claimed in claims 1, 2 and 3 characterized by the fact that includes the possibility to make enquiry, from anywhere, through the telephonic line and DTMF tones, about the fridge's conditions, receiving reply to the specific questions, through synthesised vocal messages resident in the dedicated supplemented circuit and a keypad for the manual programming and the verification of the system.